MINOR SOURCE OPERATING PERMIT (MSOP)

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT OFFICE OF AIR MANAGEMENT

and

HAMMOND DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

H-A Industries, Division of A.M. Castle & Co. 4527 Columbia Avenue Hammond, Indiana 46327

(herein known as the Permittee) is hereby authorized to operate subject to the conditions contained herein, the emission units described in Section A (Source Summary) of this permit.

This permit is issued to the above mentioned company under the provisions of 326 IAC 2-1.1, 326 IAC 2-6.1 and 40 CFR 52.780, with conditions listed on the attached pages.

Operation Permit No.: MSOP 089-12141-00248	
Issued by: Ronald L. Novak, Director Hammond Department of Environmental Management	Issuance Date:
Air Pollution Control Division	

H-A Industries, Division of A.M. Castle & Co. Hammond, Indiana Permit Reviewer: DM, HDEM

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SECTION A

SOURCE SUMMARY

This permit is based on information requested by the Indiana Department of Environmental Management (IDEM)-Office of Air Management (OAM) and the Hammond Department of Environmental Management (HDEM). The information describing the source contained in conditions A.1 through A.3 is descriptive information and does not constitute enforceable conditions. However, the Permittee should be aware that a physical change or a change in the method of operation that may render this descriptive information obsolete or inaccurate may trigger requirements for the Permittee to obtain additional permits or seek modification of this permit pursuant to 326 IAC 2, or change other applicable requirements presented in the permit application.

A.1 General Information [326 IAC 2-5.1-3(c)] [326 IAC 2-6.1-4(a)]

The Permittee owns and operates a stationary metal heat treating plant.

Authorized Individual: Tim Biter, Operations Manager

Source Address: 4527 Columbia Avenue, Hammond, Indiana 46327 Mailing Address: 3400 North Wolf Road, Franklin Park, Illinois 60131

Phone Number: (219)931-6304

SIC Code: 3398 Metal Heat Treating

County Location: Lake County

County Status: Attainment/Unclassifiable for CO and NO₂,

Attainment for Pb,

Primary Nonattainment for SO2, Moderate Nonattainment for PM10, and

Severe Nonattainment for VOC and NOx (Ozone).

Source Status: Minor Source Operating Permit

Minor Source under PSD Rules

Major Source under Emission Offset Rules

A.2 <u>Emissions units and Pollution Control Equipment Summary</u>

This stationary source is approved to operate the following emissions units and pollution control devices:

- (a) One (1) Austenitizing Furnace with eight (8) zones, identified as QT1, with a combined maximum design capacity of 18.53 MMBtu/hr heat input, natural gas-fired, using no control equipment and exhausting at three (3) stacks S1, S2, and S4, identified as QT1-01, QT1-02, and QT1-03.
- (b) One (1) Tempering Furnace with seven (7) zones, identified as QT1, with a combined maximum design capacity of 13.05 MMBtu/hr heat input, natural gas-fired, using no control equipment and exhausting at three (3) stacks S8, S9, and S10, identified as QT1-04, QT1-05, and QT1-06.
- (c) One (1) Annealing Furnace No. 1 with ten (10) zones, identified as ANN1, with a combined maximum design capacity of 16 MMBtu/hr heat input, natural gas-fired, using no control equipment and exhausting at three (3) stacks S3 and S5-S7, identified as ANN1-01, ANN1-02, ANN1-03, and ANN1-04.
- (d) One (1) Annealing Furnace No. 2 with nine (9) zones, identified as ANN2, with a combined maximum design capacity of 13.8 MMBtu/hr heat input, natural gas-fired, using no control equipment and exhausting at eight (8) stacks S11-S13, S15-S17, S19, and S20, identified as ANN2-01, ANN2-02, ANN2-03, ANN2-04, ANN2-05, ANN2-06, ANN2-07, and ANN2-08.
- (e) One Heat Treat Line Hardening Furnace with three (3) zones, identified as QT2, with a combined maximum design capacity of 11.3 MMBtu/hr heat input, natural gas-fired, using no control equipment and exhausting at one (1) stack S14, identified as QT2-01.

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(f) One Heat Treat Line Tempering Furnace with three (3) zones, identified as QT2, with a combined maximum design capacity of 9 MMBtu/hr heat input, natural gas-fired, using no control equipment and exhausting at one (1) stack S18, identified as QT2-02.

A.3 Part 70 Permit Applicability [326 IAC 2-7-2]

This stationary source is not required to have a Part 70 permit by 326 IAC 2-7-2 (Applicability) because:

- (a) It is not an affected source under Title IV (Acid Deposition Control) of the Clean Air Act, as defined in 326 IAC 2-7-1(3);
- (b) It is a major source, as defined in 326 IAC 2-7-1(22);
- (c) It is a source in a source category designated by the United States Environmental Protection Agency (U.S. EPA) under 40 CFR 70.3 (Part 70 Applicability).

H-A Industries, Division of A.M. Castle & Co. is considered a major source for Nitrogen Oxides (NOx) (>25 TPY, Lake & Porter Counties), however, the source is currently exempt from the requirements of the Title V Operation Permits program due to the NOx requirement waiver (Section 182(f) of the Clean Air Act) which increased the major stationary source threshold level for Nitrogen Oxides NOx in severe ozone nonattainment areas (Lake and Porter) as defined in 326 IAC 2-7-1(22)(C)(i)(CC) from 25 tons per year to 100 tons per year.

SECTION B GENERAL CONSTRUCTION CONDITIONS

THIS SECTION OF THE PERMIT IS BEING ISSUED UNDER THE PROVISIONS OF 326 IAC 2-1.1 AND 40 CFR 52.780, WITH CONDITIONS LISTED BELOW.

B.1 Permit No Defense [IC 13]

This permit to construct does not relieve the Permittee of the responsibility to comply with the provisions of the Indiana Environmental Management Law (IC 13-11 through 13-20; 13-22 through 13-25; and 13-30), the Air Pollution Control Law (IC 13-17) and the rules promulgated thereunder, as well as other applicable local, state, and federal requirements.

B.2 Definitions

Terms in this permit shall have the definition assigned to such terms in the referenced regulation. In the absence of definitions in the referenced regulation, any applicable definitions found in IC 13-11, 326 IAC 1-2, and 326 IAC 2-1.1-1 shall prevail.

B.3 <u>Effective Date of the Permit</u> [IC13-15-5-3]

Pursuant to IC 13-15-5-3, this permit becomes effective upon its issuance.

B.4 Modification to Permit [326 IAC 2]

All requirements and conditions of this operation permit shall remain in effect unless modified in a manner consistent with procedures established for modifications of operation permits pursuant to 326 IAC 2 (Permit Review Rules).

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SECTION C

SOURCE OPERATION CONDITIONS

Entire Source

C.1 <u>PSD Minor Source Status</u> [326 IAC 2-2] [40 CFR 52.21]

- (a) The total source potential to emit of CO and NOx (as itself, not as an ozone precursor) is less than 250 tons per year. Therefore the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration) and 40 CFR 52.21 will not apply.
- (b) Any change or modification which may increase potential to emit of CO or NOx to 250 tons per year from this source, shall cause this source to be considered a major source under PSD, 326 IAC 2-2 and 40 CFR 52.21, and shall require approval from IDEM-OAM and HDEM prior to making the change.

C.2 <u>Emission Offset Major Source Status</u> [326 IAC 2-3]

- (a) The total source potential to emit of NOx (as a precursor to ozone) is greater than 25 tons per year. Therefore, the requirements of 326 IAC 2-3 (Emission Offset) may apply.
- (b) Any increase in actual emissions from a particular physical change or change in the method of operation along with any increase or decrease in actual emissions accumulated on a pollutant specific basis over the past five years resulting in a significant net emissions increase or the potential of a source to emit NOx at a rate of 25 tons per year or greater, shall subject the source to the requirements of Emission Offset pursuant to 326 IAC 2-3, before such change may occur.
- (c) Any change or modification which may increase potential to emit of VOC to 25 tons per year, 10 tons per year of any single hazardous air pollutant, 25 tons per year of any combination of hazardous air pollutants, or 100 tons per year of any other regulated pollutant from this source, shall cause this source to be considered a major source under Part 70 Permit Program, 326 IAC 2-7, and shall require approval from IDEM-OAM and HDEM prior to making the change.

C.3 <u>Preventive Maintenance Plan</u> [326 IAC 1-6-3]

- (a) If required by specific condition(s) in Section D of this permit, the Permittee shall prepare and maintain Preventive Maintenance Plans (PMP) after issuance of this permit, including the following information on each emissions unit:
 - Identification of the individual(s) responsible for inspecting, maintaining, and repairing emission control devices;
 - (2) A description of the items or conditions that will be inspected and the inspection schedule for said items or conditions;
 - (3) Identification and quantification of the replacement parts that will be maintained in inventory for quick replacement.
- (b) The Permittee shall implement the Preventive Maintenance Plans as necessary to ensure that failure to implement the Preventive Maintenance Plan does not cause or contribute to a violation of any limitation on emissions or potential to emit.
- (c) PMP's shall be submitted to IDEM-OAM and HDEM upon request and shall be subject to review and approval by IDEM-OAM and HDEM. IDEM-OAM and HDEM may require the Permittee to revise its Preventive Maintenance Plan whenever lack of proper maintenance causes or contributes to any violation.

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C.4 Permit Revision [326 IAC 2-5.1-3(e)(3)] [326 IAC 2-6.1-6]

- (a) The Permittee must comply with the requirements of 326 IAC 2-6.1-6 whenever the Permittee seeks to amend or modify this permit.
- (b) Any application requesting an amendment or modification of this permit shall be submitted to:

Indiana Department of Environmental Management Permits Branch, Office of Air Management 100 North Senate Avenue, P.O. Box 6015 Indianapolis, Indiana 46206-6015

and

Hammond Department of Environmental Management 5925 Calumet Avenue – Room 304 Hammond, Indiana 46320

Any such application should be certified by the "authorized individual" as defined by 326 IAC 2-1.1-1.

(c) The Permittee shall notify the OAM and HDEM within thirty (30) calendar days of implementing a notice-only change. [326 IAC 2-6.1-6(d)]

C.5 Inspection and Entry [326 IAC 2-5.1-3(e)(4)(B)] [326 IAC 2-6.1-5(a)(4)]

Upon presentation of proper identification cards, credentials, and other documents as may be required by law, and subject to the Permittee's right under all applicable laws and regulations to assert that the information collected by the agency is confidential and entitled to be treated as such, the Permittee shall allow IDEM-OAM, HDEM, U.S. EPA, or an authorized representative to perform the following:

- Enter upon the Permittee's premises where a permitted source is located, or emissions related activity is conducted, or where records must be kept under the conditions of this permit;
- (b) Have access to and copy, at reasonable times, any records that must be kept under this title or the conditions of this permit or any operating permit revisions;
- (c) Inspect, at reasonable times, any processes, emissions units (including monitoring and air pollution control equipment), practices, or operations regulated or required under this permit or any operating permit revisions;
- (d) Sample or monitor, at reasonable times, substances or parameters for the purpose of assuring compliance with this permit or applicable requirements; and
- (e) Utilize any photographic, recording, testing, monitoring, or other equipment for the purpose of assuring compliance with this permit or applicable requirements.

C.6 Transfer of Ownership or Operation [326 IAC 2-6.1-6(d)(3)]

Pursuant to [326 IAC 2-6.1-6(d)(3)]:

(a) In the event that ownership of this source is changed, the Permittee shall notify IDEM-OAM, Permits Branch and HDEM, within thirty (30) days of the change.

- (b) The written notification shall be sufficient to transfer the permit to the new owner by a notice-only change pursuant to 326 IAC 2-6.1-6(d)(3).
- (c) IDEM-OAM and HDEM shall issue a revised permit.

The notification which shall be submitted by the Permittee does require the certification by the "authorized individual" as defined by 326 IAC 2-1.1-1.

C.7 Permit Revocation [326 IAC 2-1-9]

Pursuant to 326 IAC 2-1-9(a)(Revocation of Permits), this permit to operate may be revoked for any of the following causes:

- (a) Violation of any conditions of this permit.
- (b) Failure to disclose all the relevant facts, or misrepresentation in obtaining this permit.
- (c) Changes in regulatory requirements that mandate either a temporary or permanent reduction of discharge of contaminants. However, the amendment of appropriate sections of this permit shall not require revocation of this permit.
- (d) Noncompliance with orders issued pursuant to 326 IAC 1-5 (Episode Alert Levels) to reduce emissions during an air pollution episode.
- (e) For any cause which establishes in the judgment of IDEM and HDEM, the fact that continuance of this permit is not consistent with purposes of this article.

C.8 Opacity [326 IAC 5-1]

Pursuant to 326 IAC 5-1-2 (Opacity Limitations), except as provided in 326 IAC 5-1-3 (Temporary Alternative Opacity Limitations), opacity shall meet the following, unless otherwise stated in this permit:

- (a) Opacity shall not exceed an average of twenty percent (20%) in any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.
- (b) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of fifteen (15) minutes (sixty (60) readings as measured according to 40 CFR 60, Appendix A, Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuous opacity monitor) in a six (6) hour period.

C.9 Fugitive Dust Emissions [326 IAC 6-1-11.1]

The Permittee shall be in violation of 326 IAC 6-1-11.1 (Lake County Fugitive Particulate Matter Control Requirements), if the opacity of fugitive particulate emissions exceeds ten percent (10%).

Testing Requirements

C.10 Performance Testing [326 IAC 3-6]

(a) Compliance testing on new emissions units shall be conducted within 60 days after achieving maximum production rate, but no later than 180 days after initial start-up, if specified in Section D of this approval. All testing shall be performed according to the provisions of 326 IAC 3-6 (Source Sampling Procedures), except as provided elsewhere in this permit, utilizing any applicable procedures and analysis methods specified in 40 CFR 51, 40 CFR 60, 40 CFR 61, 40 CFR 63, 40 CFR 75, or other procedures approved by IDEM-OAM.

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A test protocol, except as provided elsewhere in this permit, shall be submitted to:

Indiana Department of Environmental Management Compliance Data Section, Office of Air Management 100 North Senate Avenue, P. O. Box 6015 Indianapolis, Indiana 46206-6015

and

Hammond Department of Environmental Management 5925 Calumet Avenue – Room 304 Hammond, Indiana 46320

no later than thirty-five (35) days prior to the intended test date. The Permittee shall submit a notice of the actual test date to the above addresses so that it is received at least two weeks prior to the test date.

(b) All test reports must be received by IDEM-OAM and HDEM within forty-five (45) days after the completion of the testing. An extension may be granted by the IDEM-OAM and HDEM, if the source submits to IDEM-OAM and HDEM, a reasonable written explanation within five (5) days prior to the end of the initial forty-five (45) day period.

The documentation submitted by the Permittee does not require certification by the "authorized individual" as defined by 326 IAC 2-1.1-1.

Compliance Monitoring Requirements

C.11 Compliance Monitoring [326 IAC 2-1.1-11]

Compliance with applicable requirements shall be documented as required by this permit. The Permittee shall be responsible for installing any necessary equipment and initiating any required monitoring related to that equipment. All monitoring and record keeping requirements not already legally required shall be implemented when operation begins.

C.12 Monitoring Methods [326 IAC 3]

Any monitoring or testing required by Section D of this permit shall be performed according to the provisions of 326 IAC 3, 40 CFR 60, Appendix A, or other approved methods as specified in this permit.

C.13 Pressure Gauge Specifications [326 IAC 2-1.1-11]

Whenever a condition in this permit requires the measurement of pressure drop across any part of the unit or its control device, the gauge employed shall have a scale such that the expected normal reading shall be no less than twenty percent (20%) of full scale and be accurate within plus or minus two percent (±2%) of full scale.

C.14 Actions Related to Noncompliance Demonstrated by a Stack Test

(a) When the results of a stack test performed in conformance with Section C - Performance Testing, of this permit exceed the level specified in any condition of this permit, the Permittee shall take appropriate corrective actions. The Permittee shall submit a description of these corrective actions to IDEM-OAM and HDEM, within thirty (30) days of receipt of the test results. The Permittee shall take appropriate action to minimize emissions from the affected emissions unit while the corrective actions are being implemented. IDEM-OAM or HDEM shall notify the Permittee within thirty (30) days, if the corrective actions taken are deficient. The Permittee shall submit a description of additional corrective actions taken to IDEM-OAM and HDEM within thirty (30) days of receipt of the notice of deficiency. IDEM-OAM and

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HDEM reserves the authority to use enforcement activities to resolve noncompliant stack tests.

(b) A retest to demonstrate compliance shall be performed within one hundred twenty (120) days of receipt of the original test results. Should the Permittee demonstrate to IDEM-OAM and HDEM that retesting in one-hundred and twenty (120) days is not practicable, IDEM-OAM and HDEM may extend the retesting deadline. Failure of the second test to demonstrate compliance with the appropriate permit conditions may be grounds for immediate revocation of the permit to operate the affected emissions unit.

The documents submitted pursuant to this condition do not require the certification by the "authorized individual" as defined by 326 IAC 2-1.1-1.

Record Keeping and Reporting Requirements

- C.15 <u>Malfunctions Report</u> [326 IAC 1-6-2] Pursuant to 326 IAC 1-6-2 (Records; Notice of Malfunction):
 - (a) A record of all malfunctions, including startups or shutdowns of any facility or emission control equipment, which result in violations of applicable air pollution control regulations or applicable emission limitations shall be kept and retained for a period of three (3) years and shall be made available to the Indiana Department of Environmental Management (IDEM)-Office of Air Management (OAM) or appointed representative upon request.
 - (b) When a malfunction of any facility or emission control equipment occurs which lasts more than one (1) hour, said condition shall be reported to OAM and HDEM, using the Malfunction Report Forms (2 pages). Notification shall be made by telephone or facsimile, as soon as practicable, but in no event later than four (4) daytime business hours after the beginning of said occurrence.
 - (c) Failure to report a malfunction of any emission control equipment shall constitute a violation of 326 IAC 1-6, and any other applicable rules. Information of the scope and expected duration of the malfunction shall be provided, including the items specified in 326 IAC 1-6-2(a)(1) through (6).
 - (d) Malfunction is defined as any sudden, unavoidable failure of any air pollution control equipment, process, or combustion or process equipment to operate in a normal and usual manner. [326 IAC 1-2-39]

C.16 Annual Emission Statement [326 IAC 2-6]

- (a) The Permittee shall submit an annual emission statement certified pursuant to the requirements of 326 IAC 2-6, that must be received by April 15 of each year and must comply with the minimum requirements specified in 326 IAC 2-6-4. The annual emission statement shall meet the following requirements:
 - (1) Indicate actual emissions of criteria pollutants from the source, in compliance with 326 IAC 2-6 (Emission Reporting);
 - (2) Indicate actual emissions of other regulated pollutants from the source, for purposes of Part 70 fee assessment.
- (b) The annual emission statement covers the twelve (12) consecutive month time period starting December 1 and ending November 30. The annual emission statement must be submitted to:

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Indiana Department of Environmental Management Technical Support and Modeling Section, Office of Air Management 100 North Senate Avenue, P. O. Box 6015 Indianapolis, Indiana 46206-6015

and

Hammond Department of Environmental Management 5925 Calumet Avenue – Room 304 Hammond, Indiana 46320

(c) The annual emission statement required by this permit shall be considered timely if the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM-OAM and HDEM on or before the date it is due.

The submittal by the Permittee does require the certification by the "authorized individual" as defined by 326 IAC 2-1.1-1.

C.17 Monitoring Data Availability [326 IAC 2-6.1-2] [IC 13-14-1-13]

- (a) With the exception of performance tests conducted in accordance with Section C-Performance Testing, all observations, sampling, maintenance procedures, and record keeping, required as a condition of this permit shall be performed at all times the equipment is operating at normal representative conditions.
- (b) As an alternative to the observations, sampling, maintenance procedures, and record keeping of subsection (a) above, when the equipment listed in Section D of this permit is not operating, the Permittee shall either record the fact that the equipment is shut down or perform the observations, sampling, maintenance procedures, and record keeping that would otherwise be required by this permit.
- (c) If the equipment is operating but abnormal conditions prevail, additional observations and sampling should be taken with a record made of the nature of the abnormality.
- (d) If for reasons beyond its control, the operator fails to make required observations, sampling, maintenance procedures, or record keeping, reasons for this must be recorded.
- (e) At its discretion, IDEM and HDEM may excuse such failure providing adequate justification is documented and such failures do not exceed five percent (5%) of the operating time in any quarter.
- (f) Temporary, unscheduled unavailability of staff qualified to perform the required observations, sampling, maintenance procedures, or record keeping shall be considered a valid reason for failure to perform the requirements stated in (a) above.

C.18 General Record Keeping Requirements [326 IAC 2-6.1-2]

- (a) Records of all required monitoring data and support information shall be retained for a period of at least five (5) years from the date of monitoring sample, measurement, report, or application. These records shall be kept at the source location for a minimum of three (3) years and available upon the request of an IDEM-OAM or HDEM representative. The records may be stored elsewhere for the remaining two (2) years as long as they are available upon request. If the Commissioner or HDEM makes a written request for records to the Permittee, the Permittee shall furnish the records to the Commissioner or HDEM within a reasonable time.
- (b) Records of required monitoring information shall include, where applicable:

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H-A Industries, Division of A.M. Castle & Co. Hammond, Indiana

Permit Reviewer: DM, HDEM

(1) The date, place, and time of sampling or measurements;

- (2) The dates analyses were performed;
- (3) The company or entity performing the analyses;
- (4) The analytic techniques or methods used;
- (5) The results of such analyses; and
- (6) The operating conditions existing at the time of sampling or measurement.
- (c) Support information shall include, where applicable:
 - Copies of all reports required by this permit;
 - (2) All original strip chart recordings for continuous monitoring instrumentation;
 - (3) All calibration and maintenance records;
 - (4) Records of preventive maintenance shall be sufficient to demonstrate that failure to implement the Preventive Maintenance Plan did not cause or contribute to a violation of any limitation on emissions or potential to emit. To be relied upon subsequent to any such violation, these records may include, but are not limited to: work orders, parts inventories, and operator's standard operating procedures. Records of response steps taken shall indicate whether the response steps were performed in accordance with the Compliance Response Plan required by Section C Compliance Monitoring Plan Failure to take Response Steps, of this permit, and whether a deviation from a permit condition was reported. All records shall briefly describe what maintenance and response steps were taken and indicate who performed the tasks.
- (d) All record keeping requirements not already legally required shall be implemented when operation begins.
- C.19 General Reporting Requirements [326 IAC 2-1.1-11] [326 IAC 2-6.1-2] [IC 13-14-1-13]
 - (a) Any reports required by conditions in Section D of this permit shall be submitted to:

Indiana Department of Environmental Management Compliance Data Section, Office of Air Management 100 North Senate Avenue, P. O. Box 6015 Indianapolis, Indiana 46206-6015

and

Hammond Department of Environmental Management 5925 Calumet Avenue – Room 304 Hammond, Indiana 46320

- (b) Unless otherwise specified in this permit, any notice, report, or other submission required by this permit shall be considered timely if the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM-OAM and HDEM on or before the date it is due.
- (c) The first report shall cover the period commencing on the date of issuance of this permit and ending on the last day of the reporting period.

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H-A Industries, Division of A.M. Castle & Co. Hammond, Indiana

Permit Reviewer: DM, HDEM

C.20 <u>Annual Notification</u> [326 IAC 2-6.1-5(a)(5)]

- (a) Annual notification shall be submitted to the Office of Air Management and HDEM stating whether or not the source is in operation and in compliance with the terms and conditions contained in this permit.
- (b) Noncompliance with any condition must be specifically identified. If there are any permit conditions or requirements for which the source is not in compliance at any time during the year, the Permittee must provide a narrative description of how the source did or will achieve compliance and the date compliance was, or will be, achieved. The notification must be signed by an authorized individual.
- (c) The annual notice shall cover the time period from January 1 to December 31 of the previous year, and shall be submitted in the format attached no later than April 15 of each year to:

Compliance Data Section, Office of Air Management Indiana Department of Environmental Management 100 North Senate Avenue, P.O. Box 6015 Indianapolis, IN 46206-6015

and

Hammond Department of Environmental Management 5925 Calumet Avenue – Room 304 Hammond, Indiana 46320

(d) The notification shall be considered timely if the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM-OAM and HDEM on or before the date it is due.

SECTION D.1 **EMISSIONS UNIT OPERATION CONDITIONS**

Emissions Unit Description

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

One (1) Austenitizing Furnace with eight (8) zones, identified as QT1, with a combined maximum design capacity of 18.53 MMBtu/hr heat input, natural gas-fired, using no control equipment and exhausting at three (3) stacks S1, S2, and S4, identified as QT1-01, QT1-02, and QT1-03.

Emission Limitations and Standards

Particulate Matter (PM), Sulfur Dioxide (SO2), Nitrogen Oxide (NOx), Volatile Organic Compound D.1.1 (VOC), and Carbon Monoxide (CO)

Emissions from the combustion of natural gas are governed by the Hammond Air Quality Control Ordinance No. 3522 (as amended) for the following pollutants: Particulate Matter (PM), Sulfur Dioxide (SO2), Nitrogen Oxide (NOx), Volatile Organic Compound (VOC), and Carbon Monoxide (CO).

D.1.2 Preventive Maintenance Plan [326 IAC 1-6-3]

A Preventive Maintenance Plan, in accordance with Section C - Preventive Maintenance Plan, of this permit, is required for this emissions unit and any control device.

Compliance Determination Requirements [326 IAC 2-5.1-3(e)(2)] [326 IAC 2-6.1-5(a)(2)]

D.1.3 Testing Requirements [326 IAC 2-1.1-11]

The Permittee is not required to test this emissions unit by this permit. However, IDEM or HDEM may require compliance testing when necessary to determine if the emissions unit is in compliance. If testing is required by IDEM or HDEM, compliance shall be determined by a performance test conducted in accordance with Section C - Performance Testing.

Compliance Monitoring Requirements [326 IAC 2-5.1-3(e)(2)] [326 IAC 2-6.1-5(a)(2)]

D.1.4 Compliance Monitoring

There are no compliance monitoring requirements applicable to this insignificant facility.

Record Keeping and Reporting Requirements [326 IAC 2-5.1-3(e)(2)] [326 IAC 2-6.1-5(a)(2)]

D.1.5 Record Keeping and Reporting Requirements

SECTION D.2 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

One (1) Tempering Furnace with seven (7) zones, identified as QT1, with a combined maximum design capacity of 13.05 MMBtu/hr heat input, natural gas-fired, using no control equipment and exhausting at three (3) stacks S8, S9, and S10, identified as QT1-04, QT1-05, and QT1-06.

Emission Limitations and Standards

D.2.1 Particulate Matter (PM), Sulfur Dioxide (SO2), Nitrogen Oxide (NOx), Volatile Organic Compound (VOC), and Carbon Monoxide (CO)

Emissions from the combustion of natural gas are governed by the Hammond Air Quality Control Ordinance No. 3522 (as amended) for the following pollutants: Particulate Matter (PM), Sulfur Dioxide (SO2), Nitrogen Oxide (NOx), Volatile Organic Compound (VOC), and Carbon Monoxide (CO).

D.2.2 Preventive Maintenance Plan [326 IAC 1-6-3]

A Preventive Maintenance Plan, in accordance with Section C - Preventive Maintenance Plan, of this permit, is required for this emissions unit and any control device.

Compliance Determination Requirements [326 IAC 2-5.1-3(e)(2)] [326 IAC 2-6.1-5(a)(2)]

D.2.3 Testing Requirements [326 IAC 2-1.1-11]

The Permittee is not required to test this emissions unit by this permit. However, IDEM or HDEM may require compliance testing when necessary to determine if the emissions unit is in compliance. If testing is required by IDEM or HDEM, compliance shall be determined by a performance test conducted in accordance with Section C - Performance Testing.

Compliance Monitoring Requirements [326 IAC 2-5.1-3(e)(2)] [326 IAC 2-6.1-5(a)(2)]

D.2.4 Compliance Monitoring

There are no compliance monitoring requirements applicable to this insignificant facility.

Record Keeping and Reporting Requirements [326 IAC 2-5.1-3(e)(2)] [326 IAC 2-6.1-5(a)(2)]

D.2.5 Record Keeping and Reporting Requirements

SECTION D.3 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

One (1) Annealing Furnace No. 1 with ten (10) zones, identified as ANN1, with a combined maximum design capacity of 16 MMBtu/hr heat input, natural gas-fired, using no control equipment and exhausting at three (3) stacks S3 and S5-S7, identified as ANN1-01, ANN1-02, ANN1-03, and ANN1-04.

Emission Limitations and Standards

D.3.1 Particulate Matter (PM), Sulfur Dioxide (SO2), Nitrogen Oxide (NOx), Volatile Organic Compound (VOC), and Carbon Monoxide (CO)

Emissions from the combustion of natural gas are governed by the Hammond Air Quality Control Ordinance No. 3522 (as amended) for the following pollutants: Particulate Matter (PM), Sulfur Dioxide (SO2), Nitrogen Oxide (NOx), Volatile Organic Compound (VOC), and Carbon Monoxide (CO).

D.3.2 Preventive Maintenance Plan [326 IAC 1-6-3]

A Preventive Maintenance Plan, in accordance with Section C - Preventive Maintenance Plan, of this permit, is required for this emissions unit and any control device.

Compliance Determination Requirements [326 IAC 2-5.1-3(e)(2)] [326 IAC 2-6.1-5(a)(2)]

D.3.3 Testing Requirements [326 IAC 2-1.1-11]

The Permittee is not required to test this emissions unit by this permit. However, IDEM or HDEM may require compliance testing when necessary to determine if the emissions unit is in compliance. If testing is required by IDEM or HDEM, compliance shall be determined by a performance test conducted in accordance with Section C - Performance Testing.

Compliance Monitoring Requirements [326 IAC 2-5.1-3(e)(2)] [326 IAC 2-6.1-5(a)(2)]

D.3.4 Compliance Monitoring

There are no compliance monitoring requirements applicable to this insignificant facility.

Record Keeping and Reporting Requirements [326 IAC 2-5.1-3(e)(2)] [326 IAC 2-6.1-5(a)(2)]

D.3.5 Record Keeping and Reporting Requirements

SECTION D.4 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

One (1) Annealing Furnace No. 2 with nine (9) zones, identified as ANN2, with a combined maximum design capacity of 13.8 MMBtu/hr heat input, natural gas-fired, using no control equipment and exhausting at eight (8) stacks S11-S13, S15-S17, S19, and S20, identified as ANN2-01, ANN2-02, ANN2-03, ANN2-04, ANN2-05, ANN2-06, ANN2-07, and ANN2-08.

Emission Limitations and Standards

D.4.1 Particulate Matter (PM), Sulfur Dioxide (SO2), Nitrogen Oxide (NOx), Volatile Organic Compound (VOC), and Carbon Monoxide (CO)

Emissions from the combustion of natural gas are governed by the Hammond Air Quality Control Ordinance No. 3522 (as amended) for the following pollutants: Particulate Matter (PM), Sulfur Dioxide (SO2), Nitrogen Oxide (NOx), Volatile Organic Compound (VOC), and Carbon Monoxide (CO).

D.4.2 Preventive Maintenance Plan [326 IAC 1-6-3]

A Preventive Maintenance Plan, in accordance with Section C - Preventive Maintenance Plan, of this permit, is required for this emissions unit and any control device.

Compliance Determination Requirements [326 IAC 2-5.1-3(e)(2)] [326 IAC 2-6.1-5(a)(2)]

D.4.3 Testing Requirements [326 IAC 2-1.1-11]

The Permittee is not required to test this emissions unit by this permit. However, IDEM or HDEM may require compliance testing when necessary to determine if the emissions unit is in compliance. If testing is required by IDEM or HDEM, compliance shall be determined by a performance test conducted in accordance with Section C - Performance Testing.

Compliance Monitoring Requirements [326 IAC 2-5.1-3(e)(2)] [326 IAC 2-6.1-5(a)(2)]

D.4.4 Compliance Monitoring

There are no compliance monitoring requirements applicable to this insignificant facility.

Record Keeping and Reporting Requirements [326 IAC 2-5.1-3(e)(2)] [326 IAC 2-6.1-5(a)(2)]

D.4.5 Record Keeping and Reporting Requirements

SECTION D.5 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

One Heat Treat Line Hardening Furnace with three (3) zones, identified as QT2, with a combined maximum design capacity of 11.3 MMBtu/hr heat input, natural gas-fired, using no control equipment and exhausting at one (1) stack S14, identified as QT2-01.

Emission Limitations and Standards

D.5.1 Particulate Matter (PM), Sulfur Dioxide (SO2), Nitrogen Oxide (NOx), Volatile Organic Compound (VOC), and Carbon Monoxide (CO)

Emissions from the combustion of natural gas are governed by the Hammond Air Quality Control Ordinance No. 3522 (as amended) for the following pollutants: Particulate Matter (PM), Sulfur Dioxide (SO2), Nitrogen Oxide (NOx), Volatile Organic Compound (VOC), and Carbon Monoxide (CO).

D.5.2 Preventive Maintenance Plan [326 IAC 1-6-3]

A Preventive Maintenance Plan, in accordance with Section C - Preventive Maintenance Plan, of this permit, is required for this emissions unit and any control device.

Compliance Determination Requirements [326 IAC 2-5.1-3(e)(2)] [326 IAC 2-6.1-5(a)(2)]

D.5.3 Testing Requirements [326 IAC 2-1.1-11]

The Permittee is not required to test this emissions unit by this permit. However, IDEM or HDEM may require compliance testing when necessary to determine if the emissions unit is in compliance. If testing is required by IDEM or HDEM, compliance shall be determined by a performance test conducted in accordance with Section C - Performance Testing.

Compliance Monitoring Requirements [326 IAC 2-5.1-3(e)(2)] [326 IAC 2-6.1-5(a)(2)]

D.5.4 Compliance Monitoring

There are no compliance monitoring requirements applicable to this insignificant facility.

Record Keeping and Reporting Requirements [326 IAC 2-5.1-3(e)(2)] [326 IAC 2-6.1-5(a)(2)]

D.5.5 Record Keeping and Reporting Requirements

SECTION D.6 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

One Heat Treat Line Tempering Furnace with three (3) zones, identified as QT2, with a combined maximum design capacity of 9 MMBtu/hr heat input, natural gas-fired, using no control equipment and exhausting at one (1) stack S18, identified as QT2-02.

Emission Limitations and Standards

D.6.1 <u>Particulate Matter (PM), Sulfur Dioxide (SO2), Nitrogen Oxide (NOx), Volatile Organic Compound</u> (VOC), and Carbon Monoxide (CO)

Emissions from the combustion of natural gas are governed by the Hammond Air Quality Control Ordinance No. 3522 (as amended) for the following pollutants: Particulate Matter (PM), Sulfur Dioxide (SO2), Nitrogen Oxide (NOx), Volatile Organic Compound (VOC), and Carbon Monoxide (CO).

D.6.2 Preventive Maintenance Plan [326 IAC 1-6-3]

A Preventive Maintenance Plan, in accordance with Section C - Preventive Maintenance Plan, of this permit, is required for this emissions unit and any control device.

Compliance Determination Requirements [326 IAC 2-5.1-3(e)(2)] [326 IAC 2-6.1-5(a)(2)]

D.6.3 Testing Requirements [326 IAC 2-1.1-11]

The Permittee is not required to test this emissions unit by this permit. However, IDEM or HDEM may require compliance testing when necessary to determine if the emissions unit is in compliance. If testing is required by IDEM or HDEM, compliance shall be determined by a performance test conducted in accordance with Section C - Performance Testing.

Compliance Monitoring Requirements [326 IAC 2-5.1-3(e)(2)] [326 IAC 2-6.1-5(a)(2)]

D.6.4 Compliance Monitoring

There are no compliance monitoring requirements applicable to this insignificant facility.

Record Keeping and Reporting Requirements [326 IAC 2-5.1-3(e)(2)] [326 IAC 2-6.1-5(a)(2)]

D.6.5 Record Keeping and Reporting Requirements

Hammond, Indiana Permit Reviewer: DM, HDEM

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT OFFICE OF AIR MANAGEMENT COMPLIANCE DATA SECTION

and

HAMMOND DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

MINOR SOURCE OPERATING PERMIT ANNUAL NOTIFICATION

This form should be used to comply with the notification requirements under 326 IAC 2-6.1-5(a)(5).

Company Name: H-A Industries, Division of A.M. Castle & Co.
Address: 4527 Columbia Avenue
City: Hammond, Indiana 46327
Phone #: (219)931-6304
MSOP #: 089-12141-00248
I hereby certify that [source] isstill in operation.
_ no longer in operation.
I hereby certify that [source] is _ in compliance with the requirements of MSOP 089-12141-00248 not in compliance with the requirements of MSOP 089-12141-00248 .
Authorized Individual (typed):
Title:
Signature:
Date:
If there are any conditions or requirements for which the source is not in compliance, provide a narrative description of how the source did or will achieve compliance and the date compliance was, or will be achieved.
Noncompliance:

MALFUNCTION REPORT

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT OFFICE OF AIR MANAGEMENT FAX NUMBER - (317)233-5967 HAMMOND DEPARTMENT OF ENVIRONMENTAL MANAGEMENT FAX NUMBER - (219)853-6343

This form should only be used to report malfunctions applicable to Rule 326 IAC 1-6 and to qualify for the exemption under 326 IAC 1-6-4.

THIS FACILITY MEETS THE APPLICABILITY REQUIREMENTS BEC. PARTICULATE MATTER?, 25 TONS/YEAR SULFUR DIOXIDE 25 TONS/YEAR VOC?, 25 TONS/YEAR HYDROGEN SULFIDE?, 25 TONS/YEAR HYDROGEN SULFIDE?, 10 TONS/YEAR ANY SINGLE HAZAR CAMBINATION HAZARDOUS AIR POLLUTANT?, 1 TON/YEAL ELEMENTAL LEAD?, OR IS A SOURCE LISTED UNDER 326 I MALFUNCTIONING CONTROL EQUIPMENT OR PROCESS EQUIPM APPLICABLE LIMITATION	E?, 25 TONS/YEAR NIT E?, 25 TONS/YEAR TOT , 25 TONS/YEAR FLUORIDES DOUS AIR POLLUTANT ? R LEAD OR LEAD COMPOUNI AC 2-5.1-3(2) ? EMISS	ROGEN OXIDES FAL REDUCED SU FAL REDU	?, JLFUR IS/YEAR R ANY
THIS MALFUNCTION RESULTED IN A VIOLATION OF: 326 IAC PERMIT LIMIT OF	OR, PERMIT CONDITION	N # AND/	OR
THIS INCIDENT MEETS THE DEFINITION OF 'MALFUNCTION' AS L	ISTED ON REVERSE SIDE ?	Y N	
THIS MALFUNCTION IS OR WILL BE LONGER THAN THE ONE (1)	OUR REPORTING REQUIRE	MENT? Y	N
COMPANY:	PHONE NO. ()_		
LOCATION: (CITY AND COUNTY)_ PERMIT NO AFS PLANT ID: CONTROL/PROCESS DEVICE WHICH MALFUNCTIONED AND REAS	_ AFS POINT ID: ON:	INSP:	
DATE/TIME MALFUNCTION STARTED:/ 20			AM / PM
ESTIMATED HOURS OF OPERATION WITH MALFUNCTION CONDIT	ON:		
DATE/TIME CONTROL EQUIPMENT BACK-IN SERVICE/	/ 20	AM/PM	
TYPE OF POLLUTANTS EMITTED: TSP, PM-10, SO2, VOC, OTH	HER:		
ESTIMATED AMOUNT OF POLLUTANT EMITTED DURING MALFUNC	TION:		
MEASURES TAKEN TO MINIMIZE EMISSIONS:			
REASONS WHY FACILITY CANNOT BE SHUTDOWN DURING REPAI	RS:		
CONTINUED OPERATION REQUIRED TO PROVIDE <u>ESSENTIAL</u> * SEI CONTINUED OPERATION NECESSARY TO PREVENT INJURY TO PE CONTINUED OPERATION NECESSARY TO PREVENT SEVERE DAM INTERIM CONTROL MEASURES: (IF APPLICABLE)	ERSONS: AGE TO EQUIPMENT:		
MALFUNCTION REPORTED BY:(SIGNATURE IF FAXED)	TITLE:		
MALFUNCTION RECORDED BY:DATE:	TIME:		

*SEE PAGE 2

Please note - This form should only be used to report malfunctions applicable to Rule 326 IAC 1-6 and to qualify for the exemption under 326 IAC 1-6-4.

326 IAC 1-6-1 Applicability of rule

Sec. 1. This rule applies to the owner or operator of any facility required to obtain a permit under 326 IAC 2-5.1 or 326 IAC 2-6.1.

326 IAC 1-2-39 "Malfunction" definition

Sec. 39. Any sudden, unavoidable failure of any air pollution control equipment, process, or combustion or process equipment to operate in a normal and usual manner.

*Essential services are interpreted to mean those operations, such as, the providing of electricity by power plants. Continued operation solely for the economic benefit of the owner or operator shall not be sufficient reason why a facility cannot be shutdown during a control equipment shutdown.

If this item is checked on the front, please explain rationale:

Indiana Department of Environmental Management Office of Air Management

and

Hammond Department of Environmental Management Air Pollution Control Division

Technical Support Document (TSD) for a Minor Source Operating Permit

Source Background and Description

Source Name: H-A Industries, Division of A.M. Castle & Co. Source Location: 4527 Columbia Avenue, Hammond, Indiana 46327

County: Lake

SIC Code: 3398 Metal Heat Treating

Operation Permit No.: 089-12141-00248
Permit Reviewer: Debra Malone, HDEM

The Hammond Department of Environmental Management has reviewed an application from H-A Industries, Division of A.M. Castle & Co. relating to the operation of a metal heat treating operation.

Permitted Emission Units and Pollution Control Equipment

The source consists of the following permitted emission units and pollution control devices:

- (a) One (1) Austenitizing Furnace with eight (8) zones, identified as QT1, with a combined maximum design capacity of 18.53 MMBtu/hr heat input, natural gas-fired, using no control equipment and exhausting at three (3) stacks S1, S2, and S4, identified as QT1-01, QT1-02, and QT1-03.
- (b) One (1) Tempering Furnace with seven (7) zones, identified as QT1, with a combined maximum design capacity of 13.05 MMBtu/hr heat input, natural gas-fired, using no control equipment and exhausting at three (3) stacks S8, S9, and S10, identified as QT1-04, QT1-05, and QT1-06.
- (c) One (1) Annealing Furnace No. 1 with ten (10) zones, identified as ANN1, with a combined maximum design capacity of 16 MMBtu/hr heat input, natural gas-fired, using no control equipment and exhausting at three (3) stacks S3 and S5-S7, identified as ANN1-01, ANN1-02, ANN1-03, and ANN1-04.
- (d) One (1) Annealing Furnace No. 2 with nine (9) zones, identified as ANN2, with a combined maximum design capacity of 13.8 MMBtu/hr heat input, natural gas-fired, using no control equipment and exhausting at eight (8) stacks S11-S13, S15-S17, S19, and S20, identified as ANN2-01, ANN2-02, ANN2-03, ANN2-04, ANN2-05, ANN2-06, ANN2-07, and ANN2-08.
- (e) One Heat Treat Line Hardening Furnace with three (3) zones, identified as QT2, with a combined maximum design capacity of 11.3 MMBtu/hr heat input, natural gas-fired, using no control equipment and exhausting at one (1) stack S14, identified as QT2-01.

(f) One Heat Treat Line Tempering Furnace with three (3) zones, identified as QT2, with a combined maximum design capacity of 9 MMBtu/hr heat input, natural gas-fired, using no control equipment and exhausting at one (1) stack S18, identified as QT2-02.

Unpermitted Emission Units and Pollution Control Equipment

There are no new unpermitted facilities operating at this source during this review process.

Existing Approvals

The source has been operating under previous approvals including, but not limited to, the following:

(a) Local Operation Permit #s 01781 – 01786, issued on May 18, 2000.

All conditions from previous approvals were incorporated into this permit.

Stack Summary

Stack ID	Operation	Height (feet)	Diameter (feet)	Flow Rate (acfm)	Temperature (°F)
QT1-01	Austenitizing 001	50	20	2970	350
QT1-02	Austenitizing 001	50	20	6600	400
QT1-03	Austenitizing 001	50	20	4356	350
QT1-04	Tempering 002	50	13	1600	300
QT1-05	Tempering 002	50	22	2288	300
QT1-06	Tempering 002	50	13	1984	300
ANN1-01	Annealing 003	50	27	4772	300
ANN1-02	Annealing 003	50	27	4772	300
ANN1-03	Annealing 003	50	22	3168	250
ANN1-04	Annealing 003	50	18	2112	250
ANN2-01	Annealing 004	49	13*	**	**
ANN2-02	Annealing 004	49	22*	4960	353
ANN2-03	Annealing 004	49	22*	1125	325
ANN2-04	Annealing 004	49	18*	1688	325
ANN2-05	Annealing 004	49	13*	1688	325
ANN2-06	Annealing 004	49	13*	1688	325
ANN2-07	Annealing 004	49	20*	5343	257
ANN2-08	Annealing 004	49	13*	**	**
QT2-01	Hardening 005	49	20*	Unknown	Unknown
QT2-02	Tempering 006	49	22*	Unknown	Unknown

^{*}Estimated

Enforcement Issue

There are no enforcement actions pending.

^{**}Radiant Heat Hoods at ANN2 Furnace entrance and exit.

Recommendation

The staff recommends to the Director that the operation be approved. This recommendation is based on the following facts and conditions:

Unless otherwise stated, information used in this review was derived from the application and additional information submitted by the applicant.

An application for the purposes of this review was received on February 22, 2000 with additional information received on February 28, 2000.

Emission Calculations

See Appendix A of this document for detailed emissions calculations (four (4) pages).

Potential To Emit

Pursuant to 326 IAC 2-1.1-1(16), Potential to Emit is defined as "the maximum capacity of a stationary source or emissions unit to emit any air pollutant under its physical and operational design. Any physical or operational limitation on the capacity of a source to emit an air pollutant, including air pollution control equipment and restrictions on hours of operation or type or amount of material combusted, stored, or processed shall be treated as part of its design if the limitation is enforceable by the U. S. EPA, the department, or the appropriate local air pollution control agency."

Pollutant	Potential To Emit (tons/year)
PM	2.719
PM-10	2.719
SO ₂	0.215
VOC	1.968
СО	30.052
NO _χ	42.848

HAP's	Potential To Emit (tons/year)
Lead	0.0002
TOTAL	0.0002

This table shows potential emissions (before controls) at 8760 for the entire source. Emissions are from combustion only.

- (a) The potential to emit (as defined in 326 IAC 2-7-1(29)) of Particulate Matter less than 10 microns (PM-10), Sulfur Dioxide (SO2), and Carbon Monoxide (CO) is less than 100 tons per year and Volatile Organic Compounds (VOCs) (Lake County) are less than 25 tons per year. Therefore, the source is not subject to the provisions of 326 IAC 2-7.
- (b) The potential to emit (as defined in 326 IAC 2-7-1(29)) of Nitrogen Oxides (NOx) is equal to or greater than 25 tons per year. This existing source is subject to the provisions of 326 IAC 6.1 Minor Source Operating Permit Program.
- (c) The potential to emit (as defined in 326 IAC 2-7-1(29)) of any single HAP is not equal to or greater than ten (10) tons per year and the potential to emit (as defined in 326 IAC 2-7-1(29)) of a combination HAPs is greater than or equal to twenty-five (25) tons per year. Therefore, the source is not subject to the provisions of 326 IAC 2-7.

This is not a major stationary PSD source and no major modifications have been made to the source. This is a major source for Emission Offset purposes (PTE of NOx > 25 tons per year), but no major modifications (in a severe ozone nonattainment area, an increase in NOx exceeding twenty-five (25) tons per year when the net emissions increases from the proposed modification is aggregated on a pollutant specific basis with all other net emissions increases from the source over a five (5) consecutive year period prior to, and including, the year of the modification) have been made to this existing source.

Note:

The Company is considered a major source for Nitrogen Oxides (NOx) (>25 TPY, Lake & Porter Counties), however, the source is currently exempt from the requirements of the Title V Operation Permits program due to the NOx requirement waiver (Section 182(f) of the Clean Air Act) which increased the major stationary source threshold level for Nitrogen Oxides NOx in severe ozone non-attainment areas (Lake and Porter) as defined in 326 IAC 2-7-1(22)(C)(i)(CC) from 25 tons per year to 100 tons per year.

Actual Emissions

The following table shows the actual emissions from the source. This information reflects the 1999 OAM emission data.

Pollutant	Actual Emissions (tons/year)
PM	1.694
PM-10	1.694
SO ₂	0.134
VOC	1.226
СО	18.728
NO _x	26.653
HAP (Lead)	0.0001

Limited Potential to Emit

The table below summarizes the total potential to emit, reflecting all limits, of the significant emission units.

		Limited Potential to Emit (tons/year)					
Process/facility	PM	PM-10	SO ₂	VOC	CO	NO _X	HAPs
Austenitizing Furnace	0.6168	0.6168	0.0487	0.4464	6.8176	8.1161	0
Tempering Furnace	0.4344	0.4344	0.0343	0.3144	4.8014	5.7159	0
Annealing Furnace No. 1	0.5326	0.5326	0.0420	0.3854	5.8867	7.0080	0
Annealing Furnace No. 2	0.4594	0.4594	0.0363	0.3324	5.0773	13.1163	0
Heat Treat Line Hardening Furnace	0.3762	0.3762	0.0297	0.2722	4.1575	4.9494	0
Heat Treat Line Tempering Furnace	0.2996	0.2996	0.0237	0.2168	3.3113	3.9420	0
Total Emissions	2.719	2.719	0.2147	1.9676	30.0518	42.8477	0

This table shows the allowable emissions for each pollutant for the entire source. PM, PM-10, SO₂, VOC, CO and NOx allowable emissions limits were based on the Hammond Air Quality Control Ordinance No. 3522 (as amended).

This is not a major stationary PSD source and no major modifications have been made to the source. This is a major source for Emission Offset purposes (PTE of NOx > 25 tons per year), but no major modifications (in a severe ozone nonattainment area, an increase in NOx exceeding twenty-five (25) tons per year when the net emissions increases from the proposed modification is aggregated on a pollutant specific basis with all other net emissions increases from the source over a five (5) consecutive year period prior to, and including, the year of the modification) have been made to this existing source.

County Attainment Status

The source is located in Lake County.

Pollutant	Status
PM-10	Moderate Nonattainment
SO ₂	Primary Nonattainment
NO ₂	Unclassifiable/Attainment
Ozone	Severe Nonattainment
CO	Unclassifiable/Attainment
Lead	Attainment

- (a) Volatile organic compounds (VOC) and oxides of nitrogen (NOx) are precursors for the formation of ozone. Therefore, VOC and NOx emissions are considered when evaluating the rule applicability relating to the ozone standards. Lake County has been designated as nonattainment for ozone. Therefore, VOC and NOx emissions were reviewed pursuant to the requirements for Emission Offset, 326 IAC 2-3.
- (b) Lake County has been classified as nonattainment for particulate matter less than 10 microns (PM-10), sulfur dioxide (SO₂), and ozone. Therefore, these emissions were reviewed pursuant to the requirements for Emission Offset, 326 IAC 2-3.
- (c) Fugitive Emissions
 Since this type of operation is not one of the 28 listed source categories under 326 IAC 2-2, 40 CFR 52.21, or 326 IAC 2-3 and since there are no applicable New Source
 Performance Standards that were in effect on August 7, 1980, the fugitive particulate matter (PM) and volatile organic compound (VOC) emissions are not counted toward determination of PSD and Emission Offset applicability.

Source Status

Existing Source PSD, Part 70 or FESOP Definition (emissions after controls, based on 8,760 hours of operation per year at rated capacity and/ or as otherwise limited):

Pollutant	Emissions (ton/yr)
PM	2.7190
PM10	2.7190
SO ₂	0.2147
VOC	1.9677
CO	30.0517
NO _x	42.8478

This table shows potential emissions (after controls) at 8760 for the entire source.

H-A Industries, Division of A.M. Castle & Co. 4527 Columbia Avenue, Hammond, Indiana 46327

Permit Reviewer: DM, HDEM

- (a) This existing source is a major stationary source because at least one nonattainment regulated pollutant, nitrogen oxide (NOx) is emitted at a rate of twenty-five (25) tons per year or greater.
- (b) These emissions were based on information obtained from the source's 1999 emission statement submitted on April 20, 2000.

Part 70 Permit Determination

326 IAC 2-7 (Part 70 Permit Program)

This existing source is not subject to the Part 70 Permit requirements because the potential to emit (PTE) of:

- (a) each criteria pollutant is less than 100 tons per year,
- (b) a single hazardous air pollutant (HAP) is less than 10 tons per year, and
- (c) any combination of HAPs is less than 25 tons/year.

This status is based on all the air approvals issued to the source. This status has been verified by HDEM.

Federal Rule Applicability

- (a) There are no New Source Performance Standards (NSPS)(326 IAC 12 and 40 CFR Part 60) applicable to this source.
- (b) There are no National Emission Standards for Hazardous Air Pollutants (NESHAPs)(326 IAC 14 and 40 CFR art 63) applicable to this source.

State Rule Applicability - Entire Source

326 IAC 1-6-3 (Preventive Maintenance Plan)

The source has submitted a Preventive Maintenance Plan (PMP) on March 31, 1997. This PMP has been verified to fulfill the requirements of 326 IAC 1-6-3 (Preventive Maintenance Plan).

326 IAC 2-6 (Emission Reporting)

This source is subject to 326 IAC 2-6 (Emission Reporting), because it has the potential to emit more than ten (10) tons per year of NOx in Lake County. Pursuant to this rule, the owner/operator of the source must annually submit an emission statement for the source. The annual statement must be received by April 15th of each year and contain the minimum requirement as specified in 326 IAC 2-6-4. The submittal should cover the period defined in 326 IAC 2-6-2(8)(Emission Statement Operating Year).

The source is in compliance with the required emissions statement submittals.

326 IAC 5-1 (Opacity Limitations)

Pursuant to 326 IAC 5-1-2 (Opacity Limitations), except as provided in 326 IAC 5-1-3 (Temporary Exemptions), opacity shall meet the following, unless otherwise stated in this permit:

(a) Opacity shall not exceed an average of twenty percent (20%) any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.

(b) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of fifteen (15) minutes (sixty (60) readings) as measured according to 40 CFR 60, Appendix A, Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuous opacity monitor) in a six (6) hour period.

No violations of the opacity standards have been observed at this source.

Local Rule Applicability

Hammond Air Quality Control Ordinance No. 3522 (as amended)

Emissions from the combustion of natural gas are governed by the Hammond Air Quality Control Ordinance No. 3522 (as amended) for the following pollutants: Particulate Matter (PM), Sulfur Dioxide (SO2), Volatile Organic Compound (VOC), Carbon Monoxide (CO), and Nitrogen Oxide (NOx).

Air Toxic Emissions

Indiana presently requests applicants to provide information on emissions of the 188 hazardous air pollutants (HAPs) set out in the Clean Air Act Amendments of 1990. These pollutants are either carcinogenic or otherwise considered toxic and are commonly used by industries. They are listed as air toxics on the Office of Air Management (OAM) Construction Permit Application Form Y.

None of the listed air toxics will be emitted from this source.

Conclusion

The operation of this **metal heat treat operation** shall be subject to the conditions of the attached proposed **Minor Source Operating Permit 089-12141-00248**.

Appendix A: Source Emissions Calculations

ALABAMA POWER LAW (CDS)/EIS CALCULATIONS

H-A Industries Division of A.M. Castle & Co. 4527 Columbia Avenue

Hammond, Indiana 46327

CALCULATIONS BY: Kristina Hansen

Debra Malone (6/23/00)

089-0248 PLANT ID NO: INSP DATE: 3/2/00

CALC DATE: 2/29/00

YEAR OF DATA: MSOP/1999

NO. OF POINTS: 6

NOTES

EF: EMISSION FACTOR CE: CONTROL EFFICIENCY MDR: MAXIMUM DESIGN RATE MDC: MAXIMUM DESIGN CAPACITY Ts: STACK DISCHARGE TEMPERATURE

UNITS FOR EMISSIONS ARE IN (TPY) EXCEPT WHERE GIVEN

AUSTENITIZING FURNACE 1

(001)

MDC (mmBtu/hr): 18.53

HEAT CONTENT (Btu/cft): 1,000

STACK ID (DIAM:HEIGHT): (1.67':50')

(Natural Gas Combustion)

MDR (mmcft/hr): 0.0185

QTY BURNED (mmcft/yr): 104.60

FLOWRATE (ACFM): 13,926

Ts(°F): 367

CNTRL DEV: NONE

PERMITTED OPERATING HRS:

8760

hr/yr

						· <i>y</i>						
	POTENTIAL EMISSIONS									BLE	COMPANY ACT	ΓUAL
	SCC NO. 3-90-006-89 BEFORE CONTROLS				S	А	FTER CONTROLS	S			BEFORE	AFTER
POLLUTANT	EF(lbs/mmcft)	CE (%)	(lbs/hr)	(lbs/day)	(TPY)	(lbs/hr)	(TPY)	(gr/dscf)	(lbs/hr)	(TPY)	CONTROLS	CONTROLS
PM	7.6	0	0.1408	3.3799	0.6168	0.1408	0.6168	0.0018	0.1408	0.6168	0.3975	0.3975
PM10	7.6	0	0.1408	3.3799	0.6168	0.1408	0.6168	N/A	0.1408	0.6168	0.3975	0.3975
SOx	0.6	0	0.0111	0.2668	0.0487	0.0111	0.0487	N/A	0.0111	0.0487	0.0314	0.0314
NOx	100	0	1.8530	44.4720	8.1161	1.8530	8.1161	N/A	1.8530	8.1161	5.2300	5.2300
VOC	5.5	0	0.1019	2.4460	0.4464	0.1019	0.4464	N/A	0.1019	0.4464	0.2877	0.2877
CO	84	0	1.5565	37.3565	6.8176	1.5565	6.8176	N/A	1.5565	6.8176	4.3932	4.3932
LEAD	0.0005	0	0.0000	0.0002	0.0000	0.0000	0.0000	N/A	0.0000	0.0000	0.0000	0.0000

^{*}Hammond Air Quality Control Ordinance No. 3522 (as amended)

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TEMPERING FURNACE 1 (Natural Gas Combustion)

MDC (mmBtu/hr): 13.05 MDR (mmcft/hr): 0.0131

(002)

HEAT CONTENT (Btu/cft): 1,000 QTY BURNED (mmcft/yr): 70.20 STACK ID (DIAM:HEIGHT): (1.46': 50') FLOWRATE (ACFM): 3,888

Ts(°F): 300

CNTRL DEV: NONE

PERMITTED OPERATING HRS: 8760 hr/yr

					POTENTIAL EMISSION	NS			ALLOWA	ABLE	COMPANY ACTUAL	
SCC NO. 3-90-006-89 BEFORE CONTROLS				А	FTER CONTROL	S			BEFORE	AFTER		
POLLUTANT	EF(lbs/mmcft)	CE (%)	(lbs/hr)	(lbs/day)	(TPY)	(lbs/hr)	(TPY)	(gr/dscf)	(lbs/hr)	(TPY)	CONTROLS	CONTROLS
PM	7.6	0	0.0992	2.3803	0.4344	0.0992	0.4344	0.0043	0.0992	0.4344	0.2668	0.2668
PM10	7.6	0	0.0992	2.3803	0.4344	0.0992	0.4344	N/A	0.0992	0.4344	0.2668	0.2668
SOx	0.6	0	0.0078	0.1879	0.0343	0.0078	0.0343	N/A	0.0078	0.0343	0.0211	0.0211
NOx	100	0	1.3050	31.3200	5.7159	1.3050	5.7159	N/A	1.3050	5.7159	3.5100	3.5100
VOC	5.5	0	0.0718	1.7226	0.3144	0.0718	0.3144	N/A	0.0718	0.3144	0.1931	0.1931
CO	84	0	1.0962	26.3088	4.8014	1.0962	4.8014	N/A	1.0962	4.8014	2.9484	2.9484
LEAD	0.0005	0	0.0000	0.0002	0.0000	0.0000	0.0000	N/A	0.0000	0.0000	0.0000	0.0000

^{*}Hammond Air Quality Control Ordinance No. 3522 (as amended)

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Annealing Furnace (003)(Natural Gas Combustion -- Zone 1)

MDC (mmBtu/hr): 16 MDR (mmcft/hr): 0.0160 HEAT CONTENT (Btu/cft): 1,000 QTY BURNED (mmcft/yr): 115.20 STACK ID (DIAM:HEIGHT): (1.96': 50')

FLOWRATE (ACFM): 14,824

Ts(°F): 275

(formerly 4 zones) CNTRL DEV: NONE

PERMITTED OPERATING HRS: 8760 hr/yr

POTENTIAL EMISSIONS									ALLOWA	BLE	COMPANY ACT	UAL
S0	CC NO. 1-02-006-0)3	BE	FORE CONTROLS	S	Α	FTER CONTROLS	S			BEFORE	AFTER
POLLUTANT	EF(lbs/mmcft)	CE (%)	(lbs/hr)	(lbs/day)	(TPY)	(lbs/hr)	(TPY)	(gr/dscf)	(lbs/hr)	(TPY)	CONTROLS	CONTROLS
PM	7.6	0	0.1216	2.9184	0.5326	0.1216	0.5326	0.0013	0.1216	0.5326	0.4378	0.4378
PM10	7.6	0	0.1216	2.9184	0.5326	0.1216	0.5326	0.0013	0.1216	0.5326	0.4378	0.4378
SOx	0.6	0	0.0096	0.2304	0.0420	0.0096	0.0420	N/A	0.0096	0.0420	0.0346	0.0346
NOx	100	0	1.6000	38.4000	7.0080	1.6000	7.0080	N/A	1.6000	7.0080	5.7600	5.7600
VOC	5.5	0	0.0880	2.1120	0.3854	0.0880	0.3854	N/A	0.0880	0.3854	0.3168	0.3168
CO	84	0	1.3440	32.2560	5.8867	1.3440	5.8867	N/A	1.3440	5.8867	4.8384	4.8384
LEAD	0.0005	0	0.0000	0.0002	0.0000	0.0000	0.0000	N/A	0.0000	0.0000	0.0000	0.0000

^{*}Hammond Air Quality Control Ordinance No. 3522 (as amended)

Annealing Furnace (004)MDC (mmBtu/hr): 13.8

HEAT CONTENT (Btu/cft): 1,000 QTY BURNED (mmcft/yr): 74.50 STACK ID (DIAM:HEIGHT): (1.40': 49') FLOWRATE (ACFM): 16,492

Ts(°F): 318

(Natural Gas Combustion) (formerly 8 zones) CNTRL DEV: NONE

PERMITTED OPERATING HRS: 8760

hr/yr

MDR (mmcft/hr): 0.0138

POTENTIAL EMISSIONS ALLOWABLE COMPANY ACTUAL

(AP-	(AP-42, Table 1.4-1, 2, & 3) POTENTIAL EM								ALLOWA	ABLE	COMPANY ACTUAL	
S	CC NO. 1-03-006-0	03	BE	BEFORE CONTROLS			FTER CONTROL	S			BEFORE	AFTER
POLLUTANT	EF(lbs/mmcft)	CE (%)	(lbs/hr)	(lbs/day)	(TPY)	(lbs/hr)	(TPY)	(gr/dscf)	(lbs/hr)	(TPY)	CONTROLS	CONTROLS
PM	7.6	0	0.1049	2.5171	0.4594	0.1049	0.4594	0.0011	0.1049	0.4594	0.2831	0.2831
PM10	7.6	0	0.1049	2.5171	0.4594	0.1049	0.4594	0.0011	0.1049	0.4594	0.2831	0.2831
SOx	0.6	0	0.0083	0.1987	0.0363	0.0083	0.0363	N/A	0.0083	0.0363	0.0224	0.0224
NOx***	217	0	2.9946	71.8704	13.1163	2.9946	13.1163	N/A	2.9946	13.1163	8.0833	8.0833
VOC	5.5	0	0.0759	1.8216	0.3324	0.0759	0.3324	N/A	0.0759	0.3324	0.2049	0.2049
CO	84	0	1.1592	27.8208	5.0773	1.1592	5.0773	N/A	1.1592	5.0773	3.1290	3.1290
LEAD	0.0005	0	0.0000	0.0002	0.0000	0.0000	0.0000	N/A	0.0000	0.0000	0.0000	0.0000

^{*}THIS POINT IS CLASSED "REGISTERED" ACCORDING TO THE POTENTIAL EMISSIONS.

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^{*}Hammond Air Quality Control Ordinance No. 3522 (as amended)

^{***} NOx emission factor based upon data provided by manufacturer

Heat Treat Line Hardening Furnace (Natural Gas Combustion)

CNTRL DEV: NONE

(005)

MDC (mmBtu/hr): 11.3 MDR (mmcft/hr): 0.0113 HEAT CONTENT (Btu/cft): 1,000 QTY BURNED (mmcft/yr): 81.40 STACK ID (DIAM:HEIGHT): (1.67': 49') FLOWRATE (ACFM): ?

Ts(°F): ?

PERMITTED OPERATING HRS

8760

hr/vr

			F ERWITTED OF	ERIOTINO TINO.	8700	11 / yı						
(AP-	42, Table 1.4-1, 2,	& 3)			POTENTIAL EMISSION	VS		ALLOWABLE		COMPANY ACTUAL		
S	SCC NO. 1-03-006-03 BEFORE CONTROLS					Α	FTER CONTROLS	S			BEFORE	AFTER
POLLUTANT	EF(lbs/mmcft)	CE (%)	(lbs/hr)	(lbs/day)	(TPY)	(lbs/hr)	(TPY)	(gr/dscf)	(lbs/hr)	(TPY)	CONTROLS	CONTROLS
PM	7.6	0	0.0859	2.0611	0.3762	0.0859	0.3762	#VALUE!	0.0859	0.3762	0.3093	0.3093
PM10	7.6	0	0.0859	2.0611	0.3762	0.0859	0.3762	#VALUE!	0.0859	0.3762	0.3093	0.3093
SOx	0.6	0	0.0068	0.1627	0.0297	0.0068	0.0297	N/A	0.0068	0.0297	0.0244	0.0244
NOx	100	0	1.1300	27.1200	4.9494	1.1300	4.9494	N/A	1.1300	4.9494	4.0700	4.0700
VOC	5.5	0	0.0622	1.4916	0.2722	0.0622	0.2722	N/A	0.0622	0.2722	0.2239	0.2239
CO	84	0	0.9492	22.7808	4.1575	0.9492	4.1575	N/A	0.9492	4.1575	3.4188	3.4188
LEAD	0.0005	0	0.0000	0.0001	0.0000	0.0000	0.0000	N/A	0.0000	0.0000	0.0000	0.0000

*Hammond Air Quality Control Ordinance No. 3522 (as amended)

POTENTIAL EMISSIONS

Heat Treat Line Tempering Furnace (Natural Gas Combustion)

(AP-42, Table 1.4-1, 2, & 3)

(006)

MDC (mmBtu/hr): 9 MDR (mmcft/hr): 0.0090 HEAT CONTENT (Btu/cft): 1,000 QTY BURNED (mmcft/yr): 0.00

STACK ID (DIAM:HEIGHT): (1.83': 49')

FLOWRATE (ACFM): ? Ts(°F): ?

CNTRL DEV: NONE

PERMITTED OPERATING HRS: 8760

hr/yr

			ALLOWA	ABLE	COMPANY AC	ΓUAL
ONTROL	NTROLS				BEFORE	AFTER
Y)	(gr/dscf)		(lbs/hr)	(TPY)	CONTROLS	CONTROLS
0.2996	#VALUE!		0.0684	0.2996	0.0000	0.0000
0.2996	#VALUE!		0.0684	0.2996	0.0000	0.0000

S0	CC NO. 1-03-006-0	03	BE	FORE CONTROL	S	Α	FTER CONTROL	S			BEFORE	AFTER
POLLUTANT	EF(lbs/mmcft)	CE (%)	(lbs/hr)	(lbs/day)	(TPY)	(lbs/hr)	(TPY)	(gr/dscf)	(lbs/hr)	(TPY)	CONTROLS	CONTROLS
PM	7.6	0	0.0684	1.6416	0.2996	0.0684	0.2996	#VALUE!	0.0684	0.2996	0.0000	0.0000
PM10	7.6	0	0.0684	1.6416	0.2996	0.0684	0.2996	#VALUE!	0.0684	0.2996	0.0000	0.0000
SOx	0.6	0	0.0054	0.1296	0.0237	0.0054	0.0237	N/A	0.0054	0.0237	0.0000	0.0000
NOx	100	0	0.9000	21.6000	3.9420	0.9000	3.9420	N/A	0.9000	3.9420	0.0000	0.0000
VOC	5.5	0	0.0495	1.1880	0.2168	0.0495	0.2168	N/A	0.0495	0.2168	0.0000	0.0000
CO	84	0	0.7560	18.1440	3.3113	0.7560	3.3113	N/A	0.7560	3.3113	0.0000	0.0000
LEAD	0.0005	0	0.0000	0.0001	0.0000	0.0000	0.0000	N/A	0.0000	0.0000	0.0000	0.0000

^{*}Hammond Air Quality Control Ordinance No. 3522 (as amended)

Source Totals

			POTENTIAL EMISSION	ALLOWA	BLE	COMPANY ACTUAL				
	BE	FORE CONTROL	S	А	FTER CONTROL	S			BEFORE	AFTER
POLLUTANT	(lbs/hr)	(lbs/day)	(TPY)	(lbs/hr)	(TPY)	(gr/dscf)	(lbs/hr)	(TPY)	CONTROLS	CONTROLS
PM	0.6208	14.8984	2.7190	0.6208	2.7190	#VALUE!	0.6208	2.7190	1.6944	1.6944
PM10	0.6208	14.8984	2.7190	0.6208	2.7190	#VALUE!	0.6208	2.7190	1.6944	1.6944
SOx	0.0490	1.1762	0.2147	0.0490	0.2147	#VALUE!	0.0490	0.2147	0.1338	0.1338
NOx	9.7826	234.7824	42.8478	9.7826	42.8478	#VALUE!	9.7826	42.8478	26.6533	26.6533
VOC	0.4492	10.7818	1.9677	0.4492	1.9677	#VALUE!	0.4492	1.9677	1.2262	1.2262
CO	6.8611	164.6669	30.0517	6.8611	30.0517	#VALUE!	6.8611	30.0517	18.7278	18.7278
LEAD	0.0000	0.0010	0.0002	0.0000	0.0002	#VALUE!	0.0000	0.0002	0.0001	0.0001

^{*} This source is class "Major" according to potential NOx emissions.

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^{*}Hammond Air Quality Control Ordinance No. 3522 (as amended)